November 26, 2018

Elizabeth McCoy
Planner/Project Manager (Region L)
Texas Water Development Board
Electronic Transmission: Elizabeth.mccoy@twdb.texas.gov

RE: Request for Hydrologic Variance in the 2021 Regional Water Plan

Dear Ms. McCoy,

At its November 1, 2018, meeting, the South Central Texas Regional Water Planning Group (SCTRWPG) authorized the planning group’s designated political subdivision (San Antonio River Authority, i.e. SARA) to submit a hydrologic variance request to the Texas Water Development Board (TWDB).

GBRA’s Canyon Reservoir Permit and use of the old “Region L WAM”

The Guadalupe-Blanco River Authority’s (GBRA) permit, and subsequent amendments, to divert surface water from Canyon Reservoir is unique in that it does not specify a firm yield. GBRA’s permit allows the diversion of up to 120,000 acre-feet in any given year, but the 5 year average diversion must not exceed 90,000 acre-feet per year. GBRA currently has contracts for sale of water diverted from Canyon Reservoir totaling close to 90,000 acre-feet per year in accordance with its permit.

In the 2016 Region L Regional Water Plan (RWP) and 2017 State Water Plan, the firm yield for Canyon Reservoir was calculated to be 88,400 acre-feet in the year 2070. However, the SCTRWPG used the old “Region L WAM” (i.e. Region L water availability model) to model Canyon Reservoirs supplies in the 2016 Plan. The Region L WAM modeled Canyon Reservoir based on a daily time step simulation. This model was used to simulate Federal Energy Regulatory Commission (FERC) requirements, a drought contingency trigger at the Spring Branch stream gauge, an agreement with Guadalupe Trout Unlimited, and various water rights and daily operations dependent on Canyon Reservoir. Additionally, the SCTRWPG assumed 2011 effluent figures in modeling Canyon Reservoir’s existing supply.

Hydrologic Assumptions for the 2021 Regional Water Plan

The SCTRWPG adopted hydrologic assumptions for the development of its 2021 Regional Water Plan at its meeting on November 2, 2017. Those assumptions rely on the Texas Commission on Environmental Quality (TCEQ) Unmodified Guadalupe-San Antonio (GSA) WAM for the analysis of existing supplies, water management strategies, and cumulative effects. This model operates on a monthly time step simulation, and does not account for the FERC requirements, the drought contingency trigger at the Spring Branch stream gauge, or the agreement with Guadalupe Trout Unlimited and other water rights and daily operations dependent on Canyon Reservoir. Moreover, the 2021 RWP hydrologic assumptions assumes zero effluent discharge.
Under the TCEQ Unmodified GSA WAM and no effluent assumptions, Canyon Reservoir’s firm yield is projected at about 75,000 acre-feet per year in the year 2070—a deficit of about 13,400 acre-feet from the 2016 RWP. This deficit is largely due to the difference between the monthly time step simulation used in the TCEQ Unmodified GSA WAM and the daily time step simulation used in the old Region L WAM.

Hydrologic Variance Request

The SCTRWPG’s hydrologic variance, if authorized by TWDB, would only be used for establishing Canyon Reservoir’s Existing Supply quantity, which would provide for a more accurate yield that is consistent with the actual conditions and operations set forth above. This variance would entail the following hydrologic assumptions for Canyon Reservoir’s Existing Supply:

1. Use the Region L WAM (for purposes of using the daily time step simulation);
2. No effluent used; and
3. No other changes to any water rights.

The goal of this variance request is to simulate Canyon Reservoir’s firm yield using the daily time step, which is more consistent with how the reservoir is actually operating in accordance with its permit, given the FERC requirements, drought contingency trigger at the Spring Branch stream gauge, the agreement with the Guadalupe Trout Unlimited, and the various water rights and daily operations dependent on Canyon Reservoir.

On behalf of the SCTRWPG, and in accordance with the action taken at its November 1, 2018, meeting, we ask the TWDB staff to grant this hydrologic variance request. Should you have any questions regarding this request, please contact myself (shscott@sara-tx.org), Cole Ruiz (crulz@sara-tx.org), or Brian Perkins (PerkinsRB@bv.com) by phone or email.

Sincerely,

Suzanne Scott, Chair
General Manager, San Antonio River Authority

Cc:

Brian Perkins P.E., Technical Consultant, Black and Veatch
Steve Raabe P.E., Region L Administrator, Director of Technical Services, San Antonio River Authority
Cole Ruiz, Intergovernmental Relations Coordinator, San Antonio River Authority
Hillary Lilly, Intergovernmental Relations Coordinator, San Antonio River Authority